

Claims

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ART 34 AMDT

1. A heat curable adhesive composition comprising: a caprolactone-modified epoxy resin; and a tack reducing component, [-].

2. A process for ^{heat curable} ^{composition} preparing the adhesive of claim 1 comprising: providing a caprolactone-modified epoxy resin; and blending therewith ^{the} a tack reducing component.

3. An adhesive article comprising:
a layer of ^{the} heat curable adhesive according to claim 1; and
a backing layer carrying said adhesive layer on at least a portion of the backing layer.

4. A semiconductor apparatus comprising a substrate having at least one semiconductor component mounted thereon, wherein said semiconductor component is fixed to a component-mounting surface of said substrate via a layer of ^{the} heat curable ^{composition} adhesive according to claim 1.

5. ~~The semiconductor apparatus according to Claim 4 further comprising another semiconductor component mounted to the at least one semiconductor component.~~

6. An adhesive article comprising a heat curable adhesive layer containing a caprolactone-modified epoxy resin, and a stretchable backing layer, optionally having an elongation of not less than 10%.

7. A semiconductor apparatus comprising a substrate having at least one semiconductor component mounted thereon, wherein the semiconductor component is fixed on the surface of the substrate by means of a heat curable adhesive layer containing a caprolactone-modified epoxy resin.

30 [that is a melamine/isocyanurate acid adduct or an organic compound that can be dissolved or dispersed with the modified epoxy resin in a solvent and has a glass transition temperature of 110 °C or higher and is not decomposed or modified by heating at a temperature of 200 °C or higher within a minute.]

8. A process for preparing a semiconductor apparatus comprising a substrate having at least one semiconductor component mounted thereon comprising:

laminating an adhesive article on one side of a semiconductor wafer having a plurality of the semiconductor components fabricated therein, the adhesive article
5 comprising a heat curable adhesive layer containing a caprolactone-modified epoxy resin and a stretchable backing layer, optionally wherein said backing layer has an elongation of not less than 10%;

discretely separating the semiconductor components while maintaining the semiconductor wafer and adhesive article in a laminated state;

10 stretching the backing layer of the adhesive article, followed by separating the semiconductor components with the heat curable adhesive layer adhered thereto from the backing layer; and

fixing the semiconductor components to the surface of the substrate by means of the heat curable adhesive layer.

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